

Listing and Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) Installation for fitting sleeves on products such as bottles, in which the products are fed upright, one behind the other, along a conveyor line and the sleeve is drawn from a sleeve supply by means of transfer elements from above the product, ~~characterised in that it comprises~~ comprising

[[-]] a single supply of sleeves drawn from a sheath, and

[[-]] two pairs ~~(6, 7)~~ of transfer elements ~~(61, 71)~~, each comprising two transfer elements mounted on either side of the conveyor line ~~(DF)~~ of products ~~(P)~~ and operating in alternation,

[[*]] each transfer element ~~(61, 71)~~ being supported by a conveyor means in order to effect an active travel path along the side of the product ~~(P)~~ at the sleeve fitting station ~~(E)~~, in alternation with the transfer element of the other pair ~~(6, 7)~~, in order to pick up a sleeve ~~(MA)~~ and fit it on the product ~~(P)~~ whilst the conveyor means of the transfer element of the other pair displaces the latter on a return path, separate from the active travel path,

[[-]] a means ~~(3)~~ for synchronising the products ~~(P)~~ and means for conveying the transfer elements ~~(61, 71)~~.

2. (Currently amended) Installation as claimed in claim 1, ~~characterised by~~ further comprising

a means for synchronising the products ~~(P)~~ with respect to the transfer elements is provided in the form of an inlet star ~~(3)~~ which positions the products ~~(P)~~ upstream of the sleeve fitting station ~~(E)~~.

3. (Currently amended) Installation as claimed in claim 1, ~~characterised in that~~ wherein the conveyor means for a transfer element (61, 71) comprises

[[-]] a carriage (9, 10) guided on a fixed track (11, 12) effecting an ascending and descending movement bearing the transfer element by means of an arm pivoting between a position in which it effects its active travel path and its return path by means of a control track (17-1, 17-2) accommodating a pulley (61-5, 61-6) borne by the transfer element (61), this track being displaced between an advanced position and a retracted position,

[[*]] which advanced position corresponds to the active travel path of the transfer element (61) as the carriage descends along the side of the product to be fitted with a sleeve,

[[*]] whilst the retracted position corresponds to the return path of the transfer element (61) as the carriage ascends towards the start of the next active travel path of the transfer element,

[[-]] a means (18, 18-1, 18-2, 17-5, 17-6) for displacing the control track (17-2, 17-2) and

[[-]] a driving means (15, 16) for displacing the carriage (9, 10) along its track (11, 12).

4. (Currently amended) Installation as claimed in claim 3, ~~characterised in that~~ wherein the movement of the products (P) through the sleeve fitting station (E) is continuous and the tracks (11, 12) of the carriages (9, 10) are inclined with respect to the conveyor line (DE) as a function of the active travel path to be effected during the displacement of the product to be fitted with a sleeve, so that the difference in the horizontal displacement speeds of the pair of transfer elements on their active travel path and that of the product to be fitted with a sleeve is zero.

5. (Currently amended) Installation as claimed in claim 3, ~~characterised in that~~ wherein the drive means for a carriage is provided in the form of a direct current motor (16) without a collector driving a belt (15) linked to a carriage (9, 10).
6. (Currently amended) Installation as claimed in claim 3, ~~characterised in that~~ wherein the means for displacing the control track is provided in the form of a rotating cam (18, 18-1, 18-2) co-operating with a pulley (17-5, 17-6) supported by the control track (17-1, 17-2).
7. (Currently amended) Installation as claimed in claim 1 ~~to 3~~, ~~characterised in that~~ wherein each transfer element (61) comprises a drawing device (16-1) and a clamp (16-2) for clamping the sleeve against the drawing device during the active travel path of the sleeve fitting operation, and the control track (17-1, 17-2) of the transfer element (61) is split for the drawing device (16-1) and the clamp (16-2), which effect parallel movements during the active travel path but move towards one another at the start of the travel path to clamp the sleeve and then move apart at the end of the travel path in order to release the sleeve.
8. (Currently amended) Installation as claimed in claim 1, ~~characterised in that~~ wherein the unit comprising the tracks (11, 12) of the carriages (9, 10) and the control tracks (17-1, 17-2) is pivotably mounted on the installation frame.
9. (Currently amended) Installation as claimed in claim 6, ~~characterised in that~~ wherein the rotating cam has two cam paths, one for controlling the movement of the control track (17-1) of the drawing device (61-1) and the other for the control track (17-2) of the clamp (61-2).

10. (Currently amended) Installation as claimed in claim 9, ~~characterised in that~~ wherein the rotating cam (18) controls the movement of the two control tracks of the two transfer elements on a same side of the conveyor line.

11. (New) Installation for fitting sleeves on products such as bottles, in which the products are fed, one behind the other, along a conveyor line and the sleeve is drawn from a sleeve supply by transfer elements from above the product, comprising:

a single supply of sleeves drawn from a sheath;

two pairs of transfer elements, each comprising two transfer elements mounted on either side of the conveyor line of products and operating in alternation, each transfer element being supported by a conveyor in order to effect an active travel path along the side of the product at a sleeve fitting station, in alternation with the transfer element of the other pair, to pick up a sleeve and fit it on the product whilst the conveyor of the transfer element of the other pair displaces the latter on a return path, separate from the active travel path; and

a synchronizer for the products and the conveyer for the transfer elements.

12. (New) Installation as claimed in claim 11, further comprising a synchronizer for the products with respect to the transfer elements comprising an inlet star that positions the products upstream of the sleeve fitting station.

13. (New) Installation as claimed in claim 11, wherein the conveyor for a transfer element comprises

a carriage guided on a fixed track effecting an ascending and descending movement bearing the transfer element by an arm pivoting between a position in which it effects its active travel path and its return path by a control track accommodating a pulley borne by the transfer element, this track being displaced between an advanced position and a retracted position;

wherein the advanced position corresponds to the active travel path of the transfer element as the carriage descends along the side of the product to be fitted with a sleeve,

whilst the retracted position corresponds to the return path of the transfer element as the carriage ascends towards the start of the next active travel path of the transfer element;

a displacer for the control track; and

a driver for displacing the carriage along its track.

14. (New) Installation as claimed in claim 13, wherein in normal operation the movement of the products through the sleeve fitting station is continuous and the tracks of the carriages are inclined with respect to the conveyor line as a function of the active travel path to be effected during the displacement of the product to be fitted with a sleeve, so that the difference in the horizontal displacement speeds of the pair of transfer elements on their active travel path and that of the product to be fitted with a sleeve is zero.

15. (New) Installation as claimed in claim 13, wherein the driver for a carriage comprises a brushless direct current motor driving a belt linked to a carriage.

16. (New) Installation as claimed in claim 13, wherein the displacer for the control track comprises a rotating cam co-operating with a pulley supported by the control track.

17. (New) Installation as claimed in claim 16, wherein the rotating cam has two cam paths, one for controlling the movement of the control track of the drawing device and the other for the control track of the clamp.
18. (New) Installation as claimed in claim 17, wherein the rotating cam controls the movement of the two control tracks of the two transfer elements on a same side of the conveyor line.
19. (New) Installation as claimed in claim 11, wherein each transfer element comprises a drawing device and a clamp for clamping the sleeve against the drawing device during the active travel path of the sleeve fitting operation, and the control track of the transfer element is split for the drawing device and the clamp, which move towards one another at the start of the travel path to clamp the sleeve, effect parallel movements during the active travel path, and then move apart at the end of the travel path in order to release the sleeve.
20. (New) Installation as claimed in claim 11, wherein the unit comprising the tracks of the carriages and the control tracks is pivotably mounted on the installation frame.